

EDICT OF GOVERNMENT

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JIS B 6609 (1983) (English): Safety standards for construction of hot presses



The citizens of a nation must honor the laws of the land.

Fukuzawa Yukichi



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JAPANESE INDUSTRIAL STANDARD

Safety Standards for Construction of Hot Presses

JIS B 6609-1983

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In the event of any doubt arising, the original standard in Japanese is to be evidence

JAPANESE INDUSTRIAL STANDARD

JIS

Safety Standards for Construction B 6609-1983 of Hot Presses

1. Scope

This Japanese Industrial Standard specifies the construction for safety, instruction manuals, inspection data sheets, and marking on the hot presses(1) (including the loader and unloader) using hot plates of 1800 mm or larger in length of the longer side and 900 mm or larger in length of the shorter side.

Note (1) Refer to JIS B 0114.

2. Definitions

For the purposes of this standard the following definitions apply.

- A device which inserts and sends workpieces (1) pusher for insertion on the loader cage to a predetermined position of the hot press.
- (2) pusher for positioning and pushing out A device for pushing forward workpieces, which have been inserted and sent to a predetermined position by the pusher for insertion, to a defined position on the hot plates of the hot press, pressing the workpieces there and carrying them to the unloader cage.
- (3) puller A device which pulls out workpieces to a defined position on the unloader cage.
- (4) interlock A mechanism which controlls the interrelated movements of various devices to maintain a safe and efficient operation of the machines and devices.
- (5) stop switch on machine side Safety switches which are provided at a position adjacent to the machines and devices other than the operation control board.

Applicable Standard:

JIS B 0114-Glossary of Terms for Wood Working Machinery

Reference Standards:

JIS B 6507-General Code of Safety for Wood Working Machinery

JIS B 6548-Hot Presses

3. Construction for Safety

- 3.1 Location for Operation Control Board The operation control board shall be located at a position which is suitable for the operator's work, and where he can sufficiently overlook the front and back of his process, and can work safely.
- 3.2 Push Button for Operation Push buttons for operation shall be as follows:
 - (1) The buttons shall be located at a position where the operator can operate them easily without leaving his working position.
 - (2) The buttons shall be such that they can be operated easily and are not liable to be actuated suddenly by contact, vibration and others.
 - (3) The buttons shall be fitted with such lamps as to indicate that the machines are in operation.
- 3.3 Emergency Power-Interrupting Device The emergency power-interrupting device shall be as follows:
 - (1) The emergency power-interrupting push button shall be located at a position where the operator can operate easily without leaving his working position.
 - (2) The push button shall be of red colour and of convex type.
 - (3) The push button shall be fitted with such a lamp as to indicate that the machines are in operation.
 - 3.4 Starting Circuit The starting circuit shall be as follows:
 - (1) At the time of power service interruption or when the electric source circuit for driving is opened, the circuit shall be capable of maintaining the open state automatically.
 - (2) After the restoration of power service interruption or when the electric source circuit for driving is closed, the circuit shall be capable of maintaining the open state in order to prevent the machines and devices from restarting automatically.
 - 3.5 Interlock The interlock shall be as follows:
 - (1) The pusher for insertion, exclusively under the following conditions, shall be capable of supplying the workpieces to the hot plates:
 - (a) The movable surface plate is located at its lowest position.

- (b) The loader cage at a defined position where it locates when inserting the workpieces from it into the hot plates.
- (c) The workpices are clamped by the pusher for insertion when it is automatically running.
- (d) The pusher for positioning and pushing out has returned to safety position on the way of its backward movement.
- (2) The pusher for positioning and pushing out, exclusively under the following conditions, shall be capable of transferring the workpieces to a defined position on the hot plates:
- (a) The movable surface plate is located at its lowest position.
- (b) The workpieces have arrived at a safety position on the way of their insertion to the hot plates.
- (3) The hot press, exclusively under the following conditions, shall be capable of being lifted automatically:
- (a) The pusher for positioning and pushing out has been returned to a safety position on the way of its backward movement.
- (b) The workpieces are located at a defined position on the hot plates.
- (4) The loader cage shall be capable of lowering the workpieces automatically when it reaches a safety position on the way of inserting them to the hot plates.
- (5) The pusher for positioning and pushing out, exclusively under the following conditions, shall be capable of pushing out the workpieces from the hot plates:
- (a) The movable surface plate is located at its lowest position.
- (b) The unloader cage is located at its uppermost position.
- (6) The unloader cage, exclusively under the following conditions, shall be capable of descending automatically:
- (a) The workpiece is located at a defined position on the unloader.
- (b) The puller has been returned to a safety position on the way of its backward movement.
- (c) The workpieces have been taken from the unloading conveyor of the unloader.

- 3.6 Stop Switch on Machine Side shall be as follows:
 - (1) For the purpose of entrance into any place with the possibilities of disaster, the stop switch which can stop the operations controlled by the operation board shall be provided on the machine side.
 - (2) The switch shall be fitted with keys or of lock type, and shall not be returned easily.
 - (3) The switch shall be provided with a lamp or the like to indicate that the machine is in operation.
- 3.7 Covers for Rotating Parts Covers shall be provided for the parts, such as gears, pulleys and belts, which are liable to cause rolling-in due to their contact during operation.
- 3.8 Covers for High Temperature Parts Covers shall be provided for the high temperature parts, such as steam supply pipes and drain discharge pipes, which are liable to be touched.
- 3.9 Stopping of Oil Hydraulic Driving Parts In such cases as power service interruption or operation circuit breakage, oil hydraulic driving parts shall be capable of stopping and further maintaining their stop position.
- 3.10 Prevention of Descent of Movable Surface Plate and Cage It is preferable to provide a device for preventing sudden descent of the movable surface plate or cage while exchanging the cylinder packings, cleaning the inside of the pit, and doing others.
- 3.11 Working Floor In order to carry out inspection and adjustment, working floors provided with handrails and the like around their upper structure and equipment for ensuring safe ascent and descent should preferably be furnished. However, this provision does not apply to the case of a hot press in a single body of 3.5 m or under in height from the floor surface.

4. Instruction Manual

The hot press shall be furnished with an instruction manual in which are enumerated matters necessary for securing safety, such as the type, specifications, construction, tools, operations, maintenance, inspection, adjustments, installation and others.

5. Inspection Data Sheet

The hot press shall be furnished with inspection data sheets (inspected items and their results) relating to safety.

6. Marking

The hot press shall be marked with the following information in a conspicuous place by an indelible way:

- (1) Manufacturer's name
- (2) Year and month of manufacture and serial number
- (3) Type
- (4) Size of hot plate, number of plates and interval between each successive hot plate
- (5) Gross compression force
- (6) Other matters particularly required for safety.

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